2019 Annual Dam and Dike Inspection Report

Fly Ash Pond and Bottom Ash Pond Complex

Big Sandy Plant

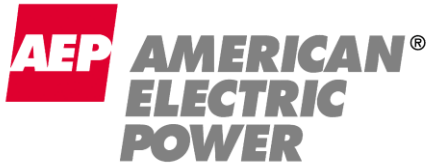
Kentucky Power

Lawrence County, KY

October 1, 2019

Prepared for: Kentucky Power – Big Sandy Plant
Louisa, Kentucky

Prepared by: American Electric Power Service Corporation
1 Riverside Plaza
Columbus, OH 43215



GERS-19-029

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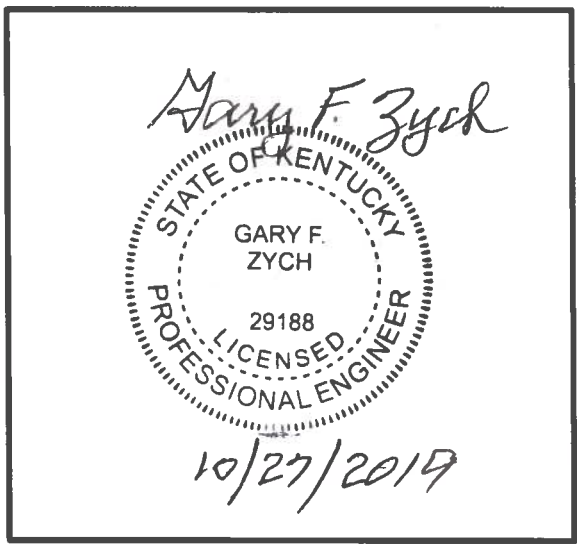
2019 Annual Dam and Dike Inspection Report

Big Sandy Plant
Fly Ash Pond and Bottom Ash Pond Complex
Document Number: GERS-19-029

PREPARED BY _____ DATE 10/25/2019
Brian G. Palmer, P.E.

REVIEWED BY _____ DATE 10/25/2019
Pedro Amaya, P.E.

APPROVED BY _____ DATE 10/27/2019
Gary F. Zych, P.E.
Manager – AEP Geotechnical Engineering



I certify to the best of my knowledge, information and belief the information contained in this report meets the requirements of 40 CFR § 257.83(b).

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1.0 INTRODUCTION

This report was prepared by AEP- Geotechnical Engineering Services (GES) section, in part, to fulfill requirements of 40 CFR 257.83 and the Kentucky Department of Environmental Protection, Division of Water, Dam Inspection Section and to provide Kentucky Power and the Big Sandy Power Plant with an evaluation of the facility.

Mr. Dexter Young, Material Handling Equipment Operator for the Big Sandy Plant provided onsite coordination for inspection activities. The inspection was performed on October 1, 2019 by Brian Palmer of AEP Geotechnical Engineering. Weather conditions were mostly sunny and temperatures in upper 70°s F to mid 90°s F, during the inspection. Approximately no precipitation had fallen in the previous 7 days.

2.0 DESCRIPTIONS OF IMPOUNDMENTS

The Big Sandy Power Plant is located north of the City of Louisa, Lawrence County, Kentucky.

It is owned and operated by Kentucky Power. The facility has historically operated two surface impoundments for managing wastewater and storing CCRs called the Bottom Ash Pond Complex and the Fly Ash Pond.

The Big Sandy Power Plant has ceased burning coal and has been refueled for natural gas. The Bottom Ash Pond Complex is being repurposed as a wastewater pond complex. All CCR material has been removed from the Bottom Ash Pond and the area backfilled and regraded. Construction activities for repurposing of the Clearwater and Reclaim Ponds for wastewater treatment is on-going. The Fly Ash Pond continues to receive wastewater from the plant for discharge through the permitted outfall and received CCR and soil wastes from the construction activities at the Bottom Ash Complex. Closure activities for the Fly Ash Pond are ongoing with expected completion in 2020.

2.1 DEFINITIONS OF VISUAL OBSERVATIONS AND DEFICIENCIES

This summary of the visual observations uses terms to describe the general appearance or condition of an observed item, activity or structure. The meaning of these terms is as follows:

Good:	A condition or activity that is generally better or slightly better than what is minimally expected or anticipated from a design or maintenance point of view.
Fair or Satisfactory:	A condition or activity that generally meets what is minimally expected or anticipated from a design or maintenance point of view.
Poor:	A condition or activity that is generally below what is minimally expected or anticipated from a design or maintenance point of view.
Minor:	A reference to an observed item (e.g., erosion, seepage, vegetation, etc.) where the current maintenance condition is below what is normal or desired, but which is not currently causing concern from a structure safety or stability point of view.
Significant:	A reference to an observed item (e.g. erosion, seepage, vegetation, etc.) where the current maintenance program has neglected to improve the condition. Usually, conditions that have been previously identified in the previous inspections, but have not been corrected.
Excessive:	A reference to an observed item (e.g., erosion, seepage, vegetation, etc.) where the current maintenance condition is above or worse than what is normal or desired, and which may have affected the ability of the observer to properly

evaluate the structure or particular area being observed or which may be a concern from a structure safety or stability point of view.

This document also uses the definition of a "deficiency" as referenced in the CCR rule section §257.83(b)(5) Inspection Requirements for CCR Surface Impoundments. This definition has been assembled using the CCR rule Preamble as well as guidance from MSHA, "Qualifications for Impoundment Inspection" CI-31, 2004. These guidance documents further elaborate on the definition of deficiency. Items not defined by deficiency are considered maintenance or items to be monitored.

A "deficiency" is some evidence that a dam has developed a problem that could impact the structural integrity of the dam. There are four general categories of deficiencies. These four categories are described below:

1. Uncontrolled Seepage
    a. Uncontrolled seepage is seepage that is not behaving as the design engineer has intended. An example of uncontrolled seepage is seepage that comes through or around the embankment and is not picked up and safely carried off by a drain. Seepage that is collected by a drain can still be uncontrolled, if it is not safely collected and transported, such as seepage that is not clear. Seepage that is unable to be measured and/or observed is considered uncontrolled seepage. [Wet or soft areas are not considered uncontrolled seepage, but they can lead to this type of deficiency. These areas should be monitored frequently.]
2. Displacement of the Embankment
    a. Displacement of the embankment is a large scale movement of part of the dam. Common signs of displacement are cracks, scarps, settlement, bulges, depressions, sinkholes and slides.
3. Blockage of Water Control Features
    a. Blockage of Control Features is the restriction of flow at spillways, decant or pipe spillways, or drains.
4. Erosion
    a. Erosion is the gradual movement of surface material by water, wind or ice. Erosion is considered a deficiency when it is more than a minor routine maintenance item.

2.2 BOTTOM ASH POND COMPLEX

The Bottom Ash Pond complex was historically comprised of the Bottom Ash Pond (BAP), the Clearwater Pond (CWP) and the Reclaim Pond. All CCR material has been removed from the Bottom Ash Pond, the earthen embankment lowered, and the remaining area backfilled and graded to drain. The remaining Clearwater Pond and Reclaim Pond are being repurposed as a lined wastewater treatment facility.

2.3 FLY ASH POND

The Fly Ash Pond is a valley impoundment with a main dam and a saddle dam. The Big Sandy Fly Ash Pond received sluiced fly ash and waste water from the plant via the Bottom Ash Pond. Bottom Ash excavated from the Big Sandy Bottom Ash Pond was also placed within the Fly Ash Pond.

3.0 REVIEW OF AVAILABLE INFORMATION (257.83(b)(1)(i))

A review of available information regarding the status and condition of the Bottom Ash Pond Complex and the Fly Ash Pond, which include files available in the operating record, such as design and construction information, previous periodic structural stability assessments, previous 7 day inspection reports, and previous annual inspections has been conducted. Based on the review of the data there were no signs of actual or potential structural weakness or adverse conditions.

4.0 INSPECTION (257.83(b)(1)(ii))

4.1 BOTTOM ASH POND COMPLEX

4.1.1 CHANGES IN GEOMETRY SINCE LAST INSPECTION (257.83(b)(2)(i))

As noted in the 2018 inspection all remaining CCR material has been removed from the Bottom Ash Pond, a closure by removal, and the embankments lowered and the area backfilled and graded to drain.

4.1.2 INSTRUMENTATION (257.83(b)(2)(ii))

The Bottom Ash Pond piezometers were abandoned in the winter/spring of 2018 as part of the closure of the Bottom Ash Pond.

4.1.3 IMPOUNDMENT CHARACTERISTICS (257.83(b)(2)(iii, iv, v))

All CCR matgerials have been removed from the Bottom Ash Pond and the pond has no capacity to impound CCR or water.

4.1.4 VISUAL INSPECTION (257.83(b)(2)(i))

The Bottom Ash Pond no longer exists and grass vegetation is being established. The Clearwater Pond and Reclaim Pond were under construction at the time of the inspection and wastewater is being pumped directly to the Fly Ash Pond from the Plant.

4.1.5 CHANGES THAT EFFECT STABILITY OR OPERATION (257.83(b)(2)(vii))

The embankments of the Bottom Ash Pond have been removed since the 2017 inspection.

4.2 FLY ASH POND

4.2.1 CHANGES IN GEOMETRY SINCE LAST INSPECTION (257.83(b)(2)(i))

No modifications have been made to the geometry of the Main Dam at the fly ash pond since the 2018 annual inspection. The crest elevation remains at elevation 712 with a limited operating pool ranging in elevation from ~650 to 655. Construction activities as part of the pond closure of the fly ash pond are on-going in the interior of the pond.

Final Cover has been installed to the upstream slope of the Saddle Dam and the Saddle Dam has been modified to allow construction of a discharge channel on the subgrade on the downstream area of the Saddle dam. At the time of this inspection, the Saddle dam has been lowered to approx. elevation 691 with only the upstream clay core remaining. The downstream bottom ash shell and riprap cover have been removed. The excavated bottom ash has been stockpiled in an open area of the fly ash pond for use as subgrade fill behind the Main Dam.

Changes in the operation of the Fly Ash Pond are discussed in Section 4.2.5 below.

4.2.2 INSTRUMENTATION (257.83(b)(2)(ii))

Location of instrumentation is included on figures in Attachment B. The maximum recorded readings of each piezometer since the previous annual inspection is shown in Table 3 below. A figure showing the readings since last year's annual inspection is included in Attachment C.

Table 3

INSTRUMENTATION DATA **Fly Ash Pond**			
Instrument	**Type**	**Maximum Reading since last annual inspection**	**Date of reading**
P-6	Piezometer	581.35	1/8/19 & 3/19/19
P-7	Piezometer	580.55	5/7/19
P-8	Piezometer	578.54	1/8/19
P-124	Piezometer	537.1	2/22/19
P-130	Piezometer	549.1	1/8/19 & 4/12/19
PR-7	Piezometer	547.2	2/22/19
PR-21	Piezometer	Underwater/Flooded	2/22/19
PE	Piezometer	542.75	2/22/19 & 4/12/19
PZ-5C	Piezometer	550.58	2/22/19
9304-A	Piezometer	544.8	4/12/19
9304-B	Piezometer	539.1	2/22/19
9304-C	Piezometer	558.3	2/22/19
9305-A	Piezometer	556.7	2/22/19
9305-B	Piezometer	524.5	2/22/19
B-1	Piezometer	Dry	NA
B-2	Piezometer	565.12	1/8/19
B-3	Piezometer	613.11	15 different dates

Piezometers readings were generally trending lower since last inspection likely related to the lowering of the pool behind the dam. The common maximum reading for several piezometers of 2/22/2019 corresponds to a high water event on Blaine Creek and the Big Sandy River. A graph of the piezometer readings is included in Attachment C.

In addition to the piezometers, the horizontal and vertical deformations of the Main Dam are monitored using 17 permanent reference points (survey monuments) and three (3) slope indicators. The deformation surveys were conducted on a semi-annual basis until November 2015 when 30-day monitoring was implemented in accordance with 40CFR257.83. The report of the 30-day monitoring is submitted to the operating record and contains the historical readings of all the settlement monuments and the recent results for the slope indicators. The reports provide graphs of the vertical and horizontal displacements as a function of time for the survey monuments. The deformation of all the monuments have been reviewed as a part of this annual inspection and no unusual or unexpected behavior has been observed. The reports provide deformation profiles for the slope indicators. The deformation profiles presented in the report do not exhibit any unexpected or unexplained behavior.

4.2.3 IMPOUNDMENT CHARACTERISTICS (257.83(b)(2)(iii, iv, v))

Table 4 is a summary of the minimum, maximum, and present depth and elevation of the impounded water & CCR since the previous annual inspection; the storage capacity of the impounding structure at the time of the inspection; and the approximate volume of the impounded water and CCR at the time of the inspection.

Table 4

IMPOUNDMENT CHARACTERISTICS	Fly Ash Pond
Approximate **Minimum** depth of impounded water since last annual inspection	<1-ft
Approximate **Maximum** depth of impounded water since last annual inspection	~20-ft
Approximate **Present** depth of impounded water at the time of the inspection[2]	~13 ft
Approximate **Minimum** depth of CCR since last annual inspection	~102-ft
Approximate **Maximum** depth of CCR since last annual inspection	~157-ft
Approximate **Present** depth of CCR at the time of the inspection[3]	~140-ft (avg)
Storage Capacity of impounding structure at the time of the inspection[4]	10,100 ac-ft.
Approximate volume of impounded water at the time of the inspection	~80 ac-ft.
Approximate volume of CCR at the time of the inspection	8,275 ac-ft

Notes:

1) Water and CCR elevations vary across the Fly Ash Pond, as such the Min. and Max. exist simultaneously.
2) Water depth based on surveyed main pool elevation of 655.15 on 9/30/19 and 5/1/18 bathometric survey of the main pool.
3) Value based on estimated avg. elevation of 680.
4) Storage capacity of pond reduced based on lowering Saddle Dam to Elev. 691.

4.2.4 VISUAL INSPECTION (257.83(b)(2)(i))

A visual inspection of the Fly Ash Pond was conducted to identify any signs of distress or malfunction of the impoundment and appurtenant structures. Specific items inspected included all structural elements of the dam such as upstream and downstream slopes, crest, and toe; as well as appurtenances such as the outlet structure from the Fly Ash Pond and pipe discharge structure.

Overall the facility is in good condition. The Main Dam is functioning as intended with no signs of potential structural weakness or conditions which are disrupting to the safe operation of the impoundment. The Saddle Dam has been modified as noted above related to the closure of the pond.

Inspection photos are included in Attachment A. Additional pictures taken during the inspection can be made available upon request. Maps showing the Main Dam and the Saddle Dam are included in Attachment B.

4.2.5 CHANGES THAT EFFECT STABILITY OR OPERATION (257.83(b)(2)(vii))

Since the last annual inspection there has been no changes that affects the stability of the Main Dam. As noted in section 4.2.1 the configuration at the Saddle Dam has changed to allow for closure activities to finish. The operation has changed with the following activities:

- A diversion berm has been sufficiently completed on the fly ash pond creating two drainage basins one directing a majority of the site to the Saddle Dam area with the remainder of the site to drain to the Main Dam.

- Final Cover has been installed over the impoundment area that drains to the Saddle Dam. Pumps have been installed to pump storm water to the pool behind the Main Dam while the Saddle Dam is being removed and a final drainage structure is being installed.
- The main pool behind the Main Dam continues to receive waste water flow from the plant.
- Continue pond closure activities, including but not limited to developing borrow areas around pond, removal of free water (lowering pool), and excavation and placement of soils and CCR materials to create a stable subgrade and a final cover system.

5.0 SUMMARY OF FINDINGS

5.1 GENERAL OBSERVATIONS

The following general observations were identified during the visual inspection. Specific maintenance and items to monitor are described in the subsequent sections of this report.

Bottom Ash Pond Complex

1) As noted in 2018 inspection, the perimeter dikes of the Bottom Ash Complex have been removed and the bottom ash pond area backfilled with clean soil.

Fly Ash Pond – Saddle Dam/Emergency Spillway

2) As part of closure activities, the Saddle Dam has been lowered in preparation for full removal.

3) The upstream clay core remains as a berm to contain storm water from the closed area upstream of the dam.

4) The closure of the upstream areas and lowering of the Saddle Dam have made the Emergency Spillway unnecessary. Thus, this area is currently being used to stage construction equipment and materials.

Fly Ash Pond – Main Dam

5) The condition of the upstream slope was good. The upstream slope is vegetated above approx. elev. 675 and groin areas have been protected with rock channels. The lower pool levels exposed more riprap below elv. 675. The riprap protection visible to the existing water line is in fair condition.

6) The decant structure's concrete and platform appeared in fair condition. The lowering of the pool has required the stairs and walkway to the platform to be relocated to maintain access to the structure. The lowered pool level has rendered the staff gauge unreadable, but weekly surveys by AEP Construction provide information on existing pool levels. The skimmer platform also appeared in satisfactory condition. A pump and treat system continues to be used to remove the free water from the pond and manage the wastewater from the plant pumped to the pond. The treatment system discharges into the outfall riser structure and exists the facility via permitted outfall 001.

7) The crest of the dam appeared in good condition with no signs of instability, misalignment, cracking, or large displacement.

8) The condition of the downstream slope limestone riprap was satisfactory. No significant weathering of the limestone was noted. Settlement monuments on the slope appeared to be in good condition. The slope did not show any visible signs of significant settlement, instability or misalignment.

9) The condition of the downstream toe area and crest of the lower sandstone buttress (590 berm) was satisfactory

10) The downstream sandstone buttress and toe ditch appeared to be in satisfactory condition with no indication of instability. No significant vegetative growth was noticed between the stones.

11) The vegetation on the right downstream groin has been sprayed.

12) The left downstream abutment and groin appeared in satisfactory and stable condition.

13) The seepage area noted in previous inspection reports on the left abutment near the access road was present. The overgrown vegetation between the left downstream groin ditch and the access road has been sprayed but the extent of the seepage area could not be inspected thoroughly.

14) The discharge pipe, channel and rectangular weir were in satisfactory condition with no obstructions or new bank erosion noted.

15) The v-notched weir (Outfall 018) and channel on the right downstream side of the dam was found in functional and good condition. However, a beaver dam located downstream of the weir was raising the downstream water elevation which could impact flow measurements.

16) The abandoned outfall pipe located near the middle of the stone buttress did not show any signs of seepage around or through the grouted pipe.

17) The seep collection system at the right downstream groin and the 590 berm appeared to be in good condition. As noted during the 2016 inspection some seepage appears to be flowing under the collection system and draining below the road and down the slope.

5.2 MAINTENANCE ITEMS

The following maintenance items were identified during the visual inspection, see inspection map for locations:

Bottom Ash Pond Complex

1) None – Construction activities

Fly Ash Pond – Saddle Dam

2) None - Area under construction

Fly Ash Pond – Main Dam

3) It is recommended to continue to control vegetative growth on areas with riprap protection. Dried vegetation shall be removed.

5.2 ITEMS TO MONITOR

The following items were identified during the visual inspection as items to be monitored, see inspection map for locations:

Bottom Ash Pond Complex

1) Monitor area for vegetative growth and erosion issues.

Fly Ash Pond – Saddle Dam

2) Monitor area for erosion and general stability during construction operations.

Fly Ash Pond – Main Dam

3) It is recommended to visually monitor the seepage areas listed below as a part of regular inspections. Any change in the clarity or quantity of the seepage water should be immediately reported to the AEP Geotechnical Engineering:

- Seepage near the left groin/abutment of the Horseford dam
- Seepage near the concrete structure of the spillway pipe outlet

- Seepage below the seepage collection sump on the right groin.

4) Monitor the growth of woody vegetation in the upstream riprap below elev. 675. This area cannot be accessed safely under current conditions. The area will be modified within the next year as part of future construction activities that place final cover over the pool area and lower the Main Dam.

5.3 DEFICIENCIES (257.83(b)(2)(vi))

There were no signs of structural weakness or disruptive conditions that were observed at the time of the inspection that would require additional investigation or remedial action. There were no deficiencies noted during this inspection or during any of the periodic 7-day or 30-day inspections. A deficiency is defined as either 1) uncontrolled seepage, 2) displacement of the embankment, 3) blockage of control features, or 4) erosion, more than minor maintenance. If any of these conditions occur before the next annual inspection contact AEP Geotechnical Engineering immediately

If you have any questions with regard to this report, please contact Brian Palmer at 614-716-3382 (Audinet: 200-3382) or Gary Zych at 614-716-2917 (Audinet: 200-2917).

ATTACHMENT A

Photos

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AEP GES Dam Inspection

Plant Name: Big Sandy

Inspector: B. Palmer

Unit: Main Dam

Date: October 1, 2019

Photo #: 1

Notes: General condition of right downstream groin

N38 11.209 W82 37.832

Photo #: 2

Notes: General condition of crest looking west

N38 11.208 W82 37.843

AEP GES Dam Inspection

Plant Name: Big Sandy

Inspector: B. Palmer

Unit: Main Dam

Date: October 1, 2019

Photo #: 3

Notes: General condition of right upstream groin

N38 11.203 W82 37.864

Photo #: 4

Notes: General condition of upstream toe looking west

N38 11.186 W82 37.895

AEP GES Dam Inspection

Plant Name: Big Sandy

Inspector: B. Palmer

Unit: Main Dam

Date: October 1, 2019

Photo #: 5

Notes: Vegetation along toe riprap

N38 11.183 W82 37.942

Photo #: 6

Notes: General condition of left upstream groin

N38 11.182 W82 38.023

AEP GES Dam Inspection

Plant Name: Big Sandy

Inspector: B. Palmer

Unit: Main Dam

Date: October 1, 2019

Photo #: 7

Notes: Outfall tower

N38 11.182 W82 38.023

Photo #: 8

Notes: Discharge hoses up face of discharge structure

N38 11.166 W82 38.007

AEP GES Dam Inspection

Plant Name: Big Sandy

Inspector: B. Palmer

Unit: Main Dam

Date: October 1, 2019

Photo #: 9

Notes: General condition of left downstream groin

N38 11.203 W82 38.029

Photo #: 10

Notes: General condition of left downstream abutment

N38 11.266 W82 38.010

AEP GES Dam Inspection

Plant Name: Big Sandy

Inspector: B. Palmer

Unit: Main Dam

Date: October 1, 2019

Photo #: 11

Notes: General condition of outfall channel

N38 11.265 W82 38.009

Photo #: 12

Notes: General condition of outfall overflow weir

N38 11.296 W82 38.005

AEP GES Dam Inspection

Plant Name: Big Sandy

Inspector: B. Palmer

Unit: Main Dam

Date: October 1, 2019

Photo #: 13

Notes: General condition of 018 seepage outfall. Downstream water backed up due to beaver dam

N38 11.276 W82 37.859

Photo #: 14

Notes: Beaver dam downstream of 018 outfall

N38 11.286 W82 37.844

AEP GES Dam Inspection

Plant Name: Big Sandy

Inspector: B. Palmer

Unit: Main Dam

Date: October 1, 2019

Photo #: 15

Notes: General condition of downstream toe

N38 11.282 W82 37.876

Photo #: 16

Notes: Old outfall

N38 11.278 W82 37.911

AEP GES Dam Inspection

Plant Name: Big Sandy

Inspector: B. Palmer

Unit: Main Dam

Date: October 1, 2019

Photo #: 17

Notes: Vegetation on Slope below 590 bench

N38 11.273 W82 37.965

Photo #: 18

Notes: General condition of downstream slope above 590 bench

N38 11.248 W82 37.881

AEP GES Dam Inspection

Plant Name: Big Sandy

Inspector: B. Palmer

Unit: Main Dam

Date: October 1, 2019

Photo #: 19

Notes: General condition of red water sump

N38 11.271 W82 37.826

Photo #: 20

Notes: Area across road from red water collection that drains to down slope to 018.

N38 11.267 W82 37.836

AEP GES Dam Inspection

Plant Name: Big Sandy

Inspector: B. Palmer

Unit: Main Dam

Date: October 1, 2019

Photo #: 21

Notes: General condition of 590 bench crest

N38 11.251 W82 37.882

Photo #: 22

Notes: General condition of toe at 590 bench

N38 11.245 W82 37.984

AEP GES Dam Inspection

Plant Name: Big Sandy

Inspector: B. Palmer

Unit: Saddle Dam

Date: October 1, 2019

Photo #: 23

Notes: General condition of saddle dam with lowering actvities

N38 10.775 W82 37.593

Photo #: 24

Notes: Upstream slope of remanent of saddle dam

N38 10.761 W82 37.600

AEP GES Dam Inspection

Plant Name: Big Sandy

Inspector: B. Palmer

Unit: Saddle Dam

Date: October 1, 2019

Photo #: 25

Notes: Looking upstream at final cover from crest of saddle dam

N38 10.740 W82 37.590

Photo #: 26

Notes: Downstream slope of saddle dam remanent

N38 10.716 W82 37.574

AEP GES Dam Inspection

Plant Name: Big Sandy

Inspector: B. Palmer

Unit: Saddle Dam

Date: October 1, 2019

Photo #: 27

Notes: Initial construction of new discharge structure in subgrade downstream of saddle dam

N38 10.737 W82 37.587

Photo #: 28

Notes: Initial construction of new discharge structure in subgrade downstream of saddle dam

N38 10.729 W82 37.530

AEP GES Dam Inspection

Plant Name: Big Sandy

Inspector: B. Palmer

Unit: Bottom Ash Pond

Date: October 1, 2019

Photo #: 29

Notes: Bottom Ash Pond area regraded and reseeded

N38 10.268 W82 37.322

Photo #: 30

Notes: Bottom Ash Pond area with vegetation

N38 10.320 W82 37.329

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ATTACHMENT B

Site Maps

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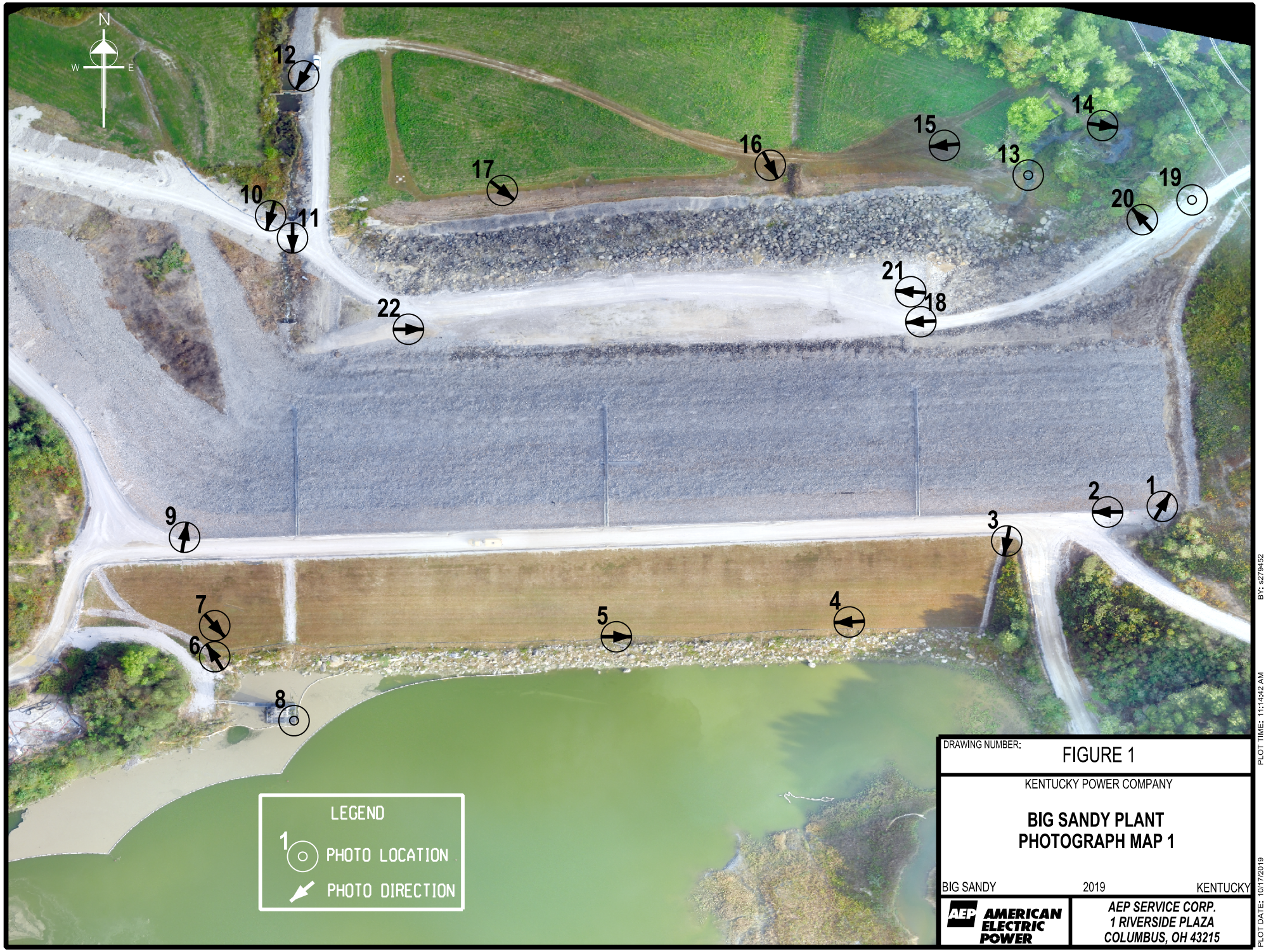

DRAWING NUMBER: FIGURE 1

KENTUCKY POWER COMPANY

BIG SANDY PLANT
PHOTOGRAPH MAP 1

BIG SANDY 2019 KENTUCKY

AEP AMERICAN ELECTRIC POWER

AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

PLOT DATE: 10/17/2019
CROSS REFS:
PLOT TIME: 11:14:42 AM
BY: s279452

A (8.5"x11")

DRAWING NUMBER:

FIGURE 2

KENTUCKY POWER COMPANY

BIG SANDY PLANT
PHOTOGRAPH MAP 2

BIG SANDY 2019 KENTUCKY

AEP AMERICAN ELECTRIC POWER

AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

PLOT DATE: 10/17/2019
PLOT TIME: 11:15:34 AM
BY: s279452
CROSS REFS:

A (8.5"x11")

DRAWING NUMBER:

FIGURE 3

KENTUCKY POWER COMPANY

BIG SANDY PLANT
PHOTOGRAPH MAP 3

BIG SANDY 2019 KENTUCKY

AEP AMERICAN ELECTRIC POWER

AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

PLOT DATE: 10/17/2019
PLOT TIME: 11:16:21 AM
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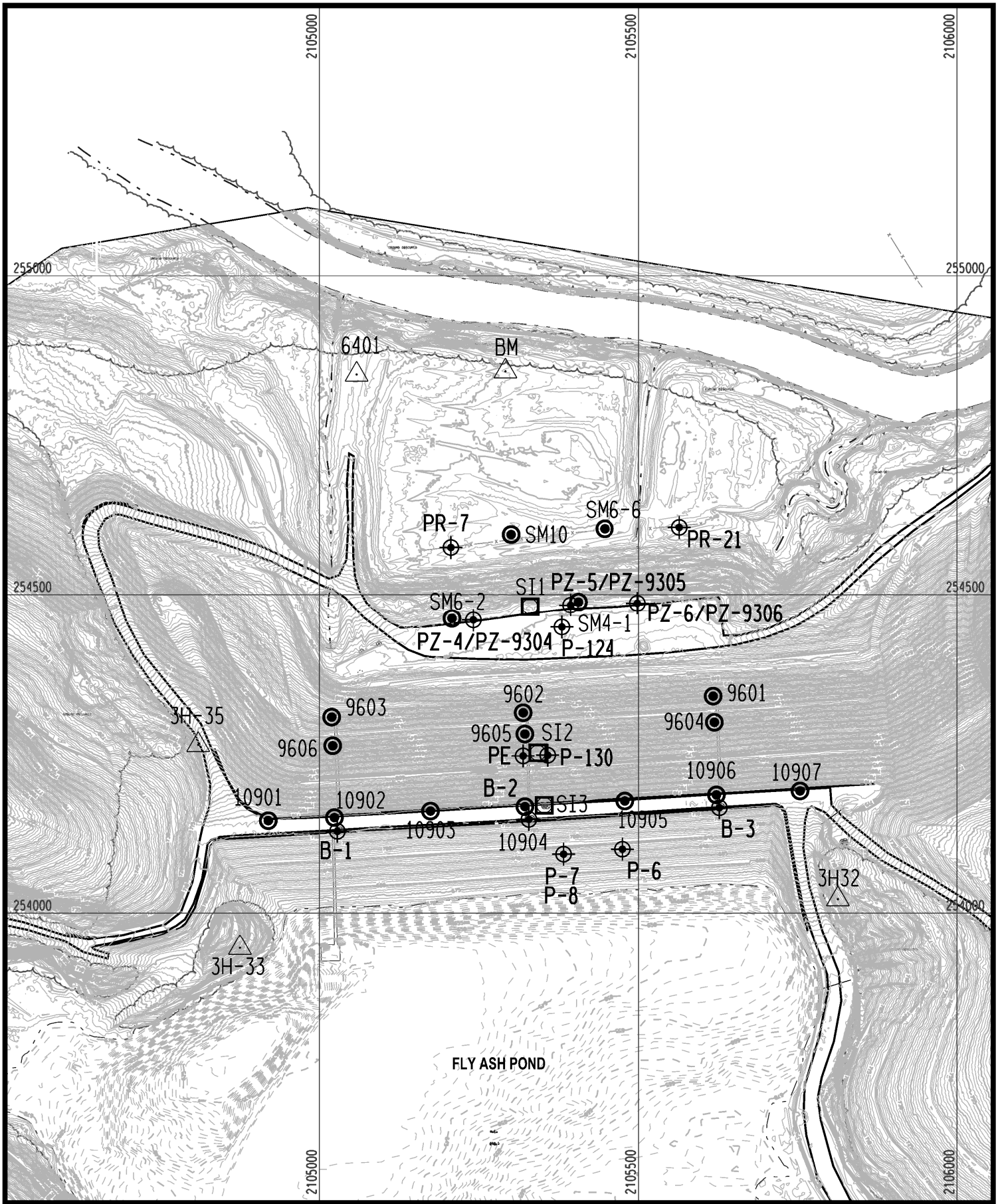

DRN BY:	BIG SANDY POWER STATION	DWG NO: FIGURE 4
DATE:	INSTRUMENTATION LOCATION	AEP AMERICAN ELECTRIC POWER
SCALE:1"=200'	FLY ASH DAM	AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215

PLOT DATE: 10/28/2019 PLOT TIME: 11:39:00 AM BY: s145543

ATTACHMENT C

Instrumentation Data

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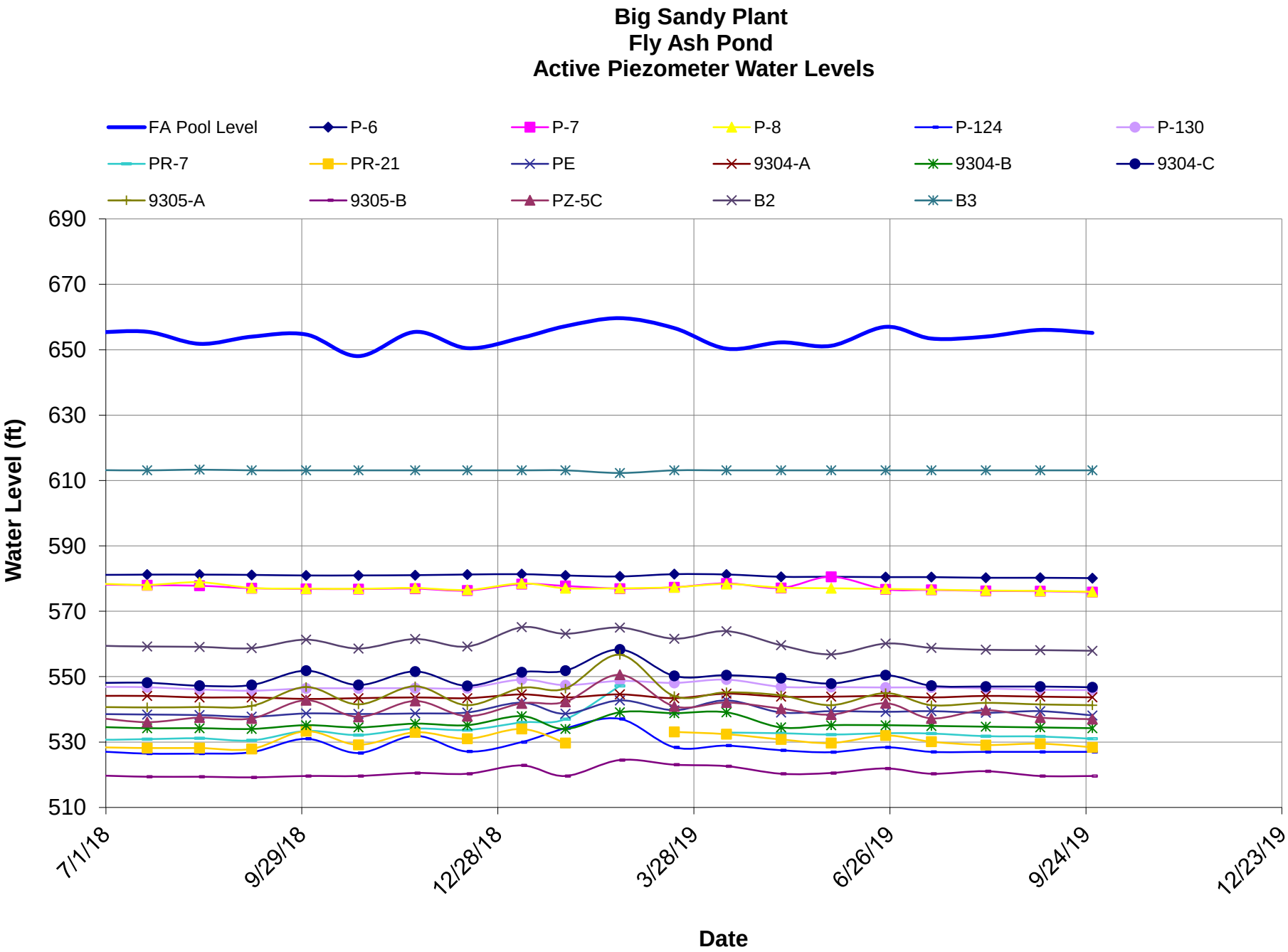
Big Sandy Plant
Fly Ash Pond
Active Piezometer Water Levels
FA Pool Level
P-6
P-7
P-8
P-124
P-130
PR-7
PR-21
PE
9304-A
9304-B
9304-C
9305-A
9305-B
PZ-5C
B2
B3
Water Level (ft)
690
670
650
630
610
590
570
550
530
510
7/1/18
9/29/18
12/28/18
3/28/19
6/26/19
9/24/19
12/23/19
Date